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AMSAT NEWS SERVICE
ANS-244

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
http://www.amsat.org/mailman/listinfo/ans

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SB SAT @ AMSAT $ANS-244.01
ANS-244 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 244.01
  From AMSAT HQ KENSINGTON, MD.
DATE September 1, 2019
To All RADIO AMATEURS
BID: $ANS-244.01

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2019.

The Symposium venue will be the Hilton Arlington, located in the heart of the Ballston neighborhood of Arlington, VA. The Hilton Arlington is located at 950 North Stafford Street, Arlington, Virginia, 22203, USA TEL: +1-703-528-6000 and the reservation code is AMSAT (Radio Amateur Satellite Corporation).

Connected to the Ballston Metro Station, the hotel offers easy and effortless access to Washington DC's top tourist destinations like the National Mall, Smithsonian Museums and historic monuments. The hotel is six miles from Reagan National Airport and the National Mall. There are plenty of restaurants nearby.

The Symposium will feature OSCAR Park - a display of satellites from throughout the history of amateur radio in space - paper presentations, and a banquet with speakers celebrating AMSAT's long history, and other events. The AMSAT Board of Directors Meeting will be held on October 16th and 17th at the same hotel. Two guided tours are available. On Sunday, October 20th a bus tour to the Smithsonian Air & Space Museum is available for $30 (max 35 people) and on Monday, October 21st, AMSAT President Joe Spier will lead a day tour to the National Mall via the Metro.

So please plan on attending the 50th Anniversary Symposium - you will be glad you did and keep checking the AMSAT website for further updates and information.

The 2019 AMSAT Space Symposium and Annual Meeting features:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members (October 16-17)
+ Opportunities to Meet Board Members and Officers
+ AMSAT Annual General Membership Meeting
+ Annual Banquet, Speakers and Door Prizes !!

The latest news and information is always posted at:
https://www.amsat.org/amsat-symposium/

[ANS thanks the 2019 AMSAT Symposium Team for the above information]

2019 AMSAT Symposium Early-Bird Registration Rate Until September 15

An early-bird registration rate for the 37th Annual AMSAT Space Symposium and General Meeting, Friday through Sunday, October 18-20, 2019, in Arlington, Virginia, is available through September 15, 2019 per the following schedule:

Early Registration Through September 15, 2019 ..... $60
Registration September 16, 2019 – October 11, 2019 .... $65
Registration at the Door $70

You can complete your registration on-line via the AMSAT Store:
https://www.amsat.org/product-category/amsat-symposium/

This year, all registrants will receive a digital copy of the Proceedings on a thumb drive. Attendees may purchase a hard copy for $25.00. Non-attendees may put their name on a waiting list for a hard copy, if there are any left over. The digital version of the Proceedings will be made available on the online store shortly after the Symposium concludes.

Student Registration is 50% off and does not include the Proceedings.

[ANS thanks the 2019 AMSAT Symposium Team for the above information]

Second Call for AMSAT 2019 Symposium Papers

This is the second call for papers for the 2019 AMSAT-NA Annual Meeting and Space Symposium to be held on October 18-20 at the Hilton Arlington, 950 North Stafford Street, Arlington, Virginia.

Proposals for papers, symposium presentations, and poster presentations are invited on any topic of interest to the amateur satellite community. We request a tentative title of your presentation as soon as possible, with final copy to be submitted by September 23 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz at n8fgv at amsat dot org.

[ANS thanks Dan Schultz, N8FGV for the above information.]

Mark Johns, KØJM, Appointed Editor-in-Chief AMSAT News Service

Robert Bankston, KE4AL, VP-User Services announced the appointment of Mark D. Johns, KØJM, as Editor-in-Chief of the AMSAT News Service.

Johns, currently serving as a rotating ANS weekly editor, steps up to replace EMike McCardel, AA8EM, who is facing a long recovery following a serious injury while clearing storm damage at his home in early August.

Mark Johns is Professor Emeritus, Journalism and Communication Studies, of Luther College, Decorah, Iowa, but now resides in the Minneapolis, Minn. area. He is a life member of ARRL and AMSAT, holds a DXCC Satelite certificate, and is a member of the Minnesota Wireless Association and the Twin Cities DX Association (TCDXA). Mark is also on the editorial staff of the Gray Line Report, the newsletter of the TCDXA.

Mark grew up in Des Moines, Iowa and was first licensed there in 1967 as WNØRGV. Through college, grad school, and early career he operated from various QTHs in Nebraska, Minnesota, and Iowa as WAØRGV, and later as KØMDJ. He began operating satellites in the early 1980s. After living in Cedar Falls, Iowa for 26 years, he took a one year work assignment in Nottingham, UK during 2011-12 and operated there as MØGZO. From fall of 2012 until spring of 2017 his QTH was Decorah, but he also operated in Malta as 9H3DJ for half of 2016 while on another work assignment. His current callsign was granted in 2018, and he is primarily active on the linear transponder satellites.

[ANS thanks Robert Bankston, KE4AL, VP-User Services for the above information]

Emergency Traffic Relayed over AO-92 Satellite

On August 27, 2019, Clayton, W5PFG, and his father Jack, AC5DI, were traversing the Chihuahuan Desert in Big Bend National Park, Texas, USA, when their vehicle became stuck in mud from recent monsoon rains.

Being stuck up to the axles, they were unable to self-recover from the situation, requiring assistance from Park Rangers. August temperatures in this desert reach upwards of 110-115 degrees Fahrenheit. There is no mobile phone coverage outside park headquarters.

Clayton made contact via AMSAT satellite AO-92 with Kevin, KK4YEL, in Florida. During the satellite pass, stations stood by while Clayton relayed emergency traffic to Kevin. This information included details about the situation including precise latitude and longitude, the phone number for Big Bend National Park, vehicle description, and welfare of the party.

Other stations listening to the pass including Brian, KG5GJT, contacted the park headquarters. Within two hours, Park Rangers arrived on scene and recovered the stuck vehicle. No person was injured, and no equipment was damaged.

Clayton and Jack were traveling to DL88jx, a maidenhead grid square highly sought after by many ARRL VUCC members. Clayton had previously made two successful trips to DL88jx. Both Clayton and Jack are very grateful to Kevin, KK4YEL, the responsiveness of the amateur radio community, and to the Park Rangers and staff of Big Bend National Park.

Incident discussion via Twitter quickly provided recordings of the AO-92 satellite traffic:

Recording courtesy of KQ4MM
https://twitter.com/KQ4MM/status/1166396579416354816

Recording courtesy of CO6CBF/W5CBF
https://twitter.com/CO6CBF/status/1166432549847085056

[ANS thanks Clayton Coleman, W5PFG, for the above information]

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+ Tuesday, September 3, 2019 08:06 UTC
   Kingston Community School, Kingston SE, South Australia, tele-
   bridge via K6DUE located in Maryland. The ISS callsign is pre-
   sently scheduled to be NA1SS. The scheduled astronaut is Drew
   Morgan KI5AAA. Listen on 145.800 for east coast North American
   stations.

+ Tuesday, September 3, 2019 16:05 UTC
   Galileo STEM Academy, Eagle, ID, direct via W7GSA. The ISS call-
   sign is presently scheduled to be NA1SS. The scheduled astronaut
   is Nick Hague KG5TMV. Listen on 145.800 for western North Amer-
   ican stations.

AMSAT and ARISS are currently supporting a FundRazr campaign to raise $150,000 for critical radio infrastructure upgrades on ISS. These upgrades are necessary to enable students to continue to talk to astronauts in space via Amateur Radio. We have reached a great milestone with $24,130 raised or about 16% towards our goal. This would not have been possible without your outstanding generosity!! For more information and to DONATE TODAY visit:
       https://fundrazr.com/arissnextgen?ref=ab_e7Htwa_ab_47IcJ9

[ANS thanks ARISS for the above information]

AMSAT SA Dual Band Yagi Now Available for Export

AMSAT South Africa (AMSAT SA) has developed a dual-band Yagi VHF/UHF antenna for satellite operation. The antenna has a 50-ohm designed driver. The Yagi has a unique element called a 'Open Sleeve' which is a director very close to the driven element. The driven element is sized for 2M. When operating on 70cm the 'Open Sleeve' acts as part of the driven element on 70cm (Third harmonic of 2M).

The original concept was developed in 1946 by Dr J T Bolljahn of the Stanford Research institute but was not introduced into amateur radio until the 1950s. The AMSAT SA version is based on a design by DK7ZB with modifications by WB5CXC.

Until recently this antenna was available only in South Africa. Following requests from many amateurs outside South Africa AMSAT SA can offer the Yagi for export if ordered in a batch of 6, at R950 each (approx US $65), total for a batch of 6 is R5700. (approx US $ 390) to countries in the European Union and the USA. For Australia and New Zealand R1000 per unit in a batch of 6 total RR6000. Pricing for other countries on request.

More information is available on the AMSAT SA web:
http://www.amsatsa.org.za/
http://www.amsatsa.org.za/DualbandYagi.htm

[ANS thanks AMSAT SA for the above information]

Upcoming Satellite Operations

+ Help Celebrate AMSAT's 50th Anniversary with these "W3ZM on the Road"
   Operations: https://www.amsat.org/events/was-w3zm/

+ N7MJ Roving 11 State Tour - WY, NE, IA, IL, KY, TN, AR, OK, TX, NM,
   AZ, August 25th - September 9th, 2019.

Jack M7MJ is heading out (in his Vette) on a 2 weeks road trip from Cheyenne, WY to the big 25th Anniversary Celebration of the National Corvette Museum in Bowling Green, KY, (August 28-31). Then he will head through TN to AR (EM34) for a family gathering 9/3-4, the another family gathering 9/4-5 in Atoka, OK (EM14/24). With the partying over, down through TX and NM and end up in Chandler, AZ. FM only.

+ Way Up in the Northeast (GN27, GN26, GN37) Aug 26 - Sept 7, 2019
Chris, VE3FU will be in GN27 August 26-30 and will try to make a trip to GN26, possibly on the GN26/27 line. He will be in GN37 (again) August 30-September 7. Chris will be operating as VO2AC/1 and try to announce operating times on Twitter as far ahead as possible. https://twitter.com/ChrisVE3FU.

+ Peru - August 31 - September 7, 2019
Tony, KD8RTT will be in Peru Saturday night, August 31 and leave on Saturday, September 7. FM passes, mainly AO-91 and AO-92, vacation schedule permitting. Tony is not exactly sure what days/times he can operate yet, but he'll try to tweet before he gets on any passes. https://twitter.com/kd8rtt

+ AM1SAT (All Grids in Spain) September 9-15, 2019
AMSAT-EA will be transmitting its special call AM1SAT via all active satellites from September 9th to September 15th as part of the V RadioHam Fair IberRadio 2019 activities. IberRadio is the biggest event for the ham community in SouthWest Europe and will open doors September 14th and 15th . Learn more about IberRadio at http://www.iberradio.es.

The AM1SAT call sign will be active from a minimum of 14 different grids during that time to help satellite operators to collect as much EA locators as possible.

As part of this activity and in order to promote the participation, AMSAT-EA is sponsoring the AM1SAT Special Award in two categories, Silver and Gold. More info available at https://www.amsat-ea.org/ and as a pdf at https://tinyurl.com/ANS-237-AM1SAT-Award.

+ D4, CAPE VERDE (Update/Satellite Op). Harald, DF2WO, will once again be active as D44TWO from Praia, Santiago Island (AF-005), between September 29th and October 13th. Activity will be holiday style on 160-10 meters using CW, SSB and mostly the Digital modes. (FT8, PSK31, JT65 and RTTY) and slow CW.

Harald has been working hard in the last few months getting his satellite station for QO-100 working and is now confident he will use it from Cabo Verde. He will be using an Icom 7300, 2 Transverters with 3 watts output on EsHail using the QO-100 Geostationary Satellite. He will also have a FT-450D into a homemade HEX BEAM and a dipole for 40 meters. Please DO NOT send your card via the Bureau it WILL NOT be received - To receive a bureau card you MUST request via M0OXO OQRS ONLY! (Via Ohio/Penn DX Bulletin #1428)

+ WW0, UNITED STATES (Special Event). Members of the Northern Colorado Amateur Radio Club (NCARC), WWV ARC, RMHam, and FCCW along with the National Institute of Standards and Technology (NIST) will activate special event station WW0WWV between September 28 and October 2 to celebrate the 100th anniversary of WWV, the world's oldest continuously operating radio station.

The WW0WWV station(s) will be set up adjacent to the WWV transmitter site in Fort Collins, Colorado. Operations will be on various HF bands following typical propagation, and will include 160 meters as well as

satellites (SO-50, AO-91, and AO-92) and 6-meter meteor scatter.

Modes will be CW, SSB and digital. QSL via ClubLog's OQRS, LoTW, or direct to the WWV Amateur Radio Club, 1713 Ridgewood Rd, Fort Collins, CO 80526, USA. For more details, visit the following URLs:
http://wwv100.com
https://tinyurl.com/ANS-244-NIST-WWV
(Via Ohio/Penn DX Bulletin #1428)

[ANS Thanks Robert Bankston, KE4AL, for the above information]

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   by Dave Akerman M0RPI
+ Insurance & UKHAS Server Support by Steve Randall G8KHW
+ Recovering, Reprogramming and Re-flying Radiosondes by Andrew
   Mulholland MI0BPB
+ Hwoyee NSL-45 Experiences by Dave Akerman M0RPI and Steve
   Randall G8KHW

There will be helium and foil balloons available for the pico launch
at the end of the conference.

UKHAS conference information is at:
  https://ukhas.org.uk/general:ukhasconference2019

Tickets are at https://tinyurl.com/ANS-244-Tickets-UKHAS

[ANS thanks UKHAS and AMSAT-UK for the above information]

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          The digital download version of the 2019 edition of
     Getting Started with Amateur Satellites is now available as a
        DRM-free PDF from the AMSAT Store.  Get yours today!
           https://tinyurl.com/ANS-237-Getting-Started

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CAMSAT Applies for IARU Coordination for Four V/U Transponder Satellites

The Chinese Amateur Satellite Group (CAMSAT) has applied for frequency
coordination for four small satellites - CAS-8A, CAS-8B, CAS-8C, and
CAS-8D. The CAS-8 satellites are a Student Small Satellites project
initiated by the Asia-Pacific Space Cooperation Organization (APSCO),
which is headquartered in Beijing China. APSCO was inaugurated in 2008
as an inter-governmental organization. including Bangladesh, China,
Mongolia, Pakistan, Peru, Thailand, Turkey and Indonesia.

The project consists of four satellites, including a pilot microsatel-
lite CAS-8A for technical verification and a primary microsatellite
CAS-8B, two 3U cube satellites CAS-8C and CAS-8D. CAS-8A is scheduled
to be launched by the end of 2020, and the CAS-8B, CAS-8C, CAS-8D sat-
ellites are scheduled to be launched at the end of 2021 ON the same
launch.

The CAS-8 satellites project is supported by the Chinese government. The
project is led by Beihang University, which is China's most outstanding
university in aerospace. tHE Chinese Amateur Satellite Group (CAMSAT)
cooperates with Beihang University to bring amateur radio into the pro-
ject.

the CAS-8 satellites will realize the synergy between the eight countries
of APSCO to build an amateur radio alliance through space, adding new
science popularization tools to young students in APSCO member countries
for self-training, inter-communication and technical investigations, and
also providing a new satellite platform for amateur radio enthusiasts
around the world.

CAMSAT 8A - 30kg Microsat. V/U transponder, UHF CW and AX25 4k8/9k6
             GMSK telemetry beacons and S Band 192kbps GMSK Image and
             4k8/9k6 GMSK telemetry downlinks. Planning a launch from
             Jiuquan in Oct 2020 into a 600km SSO.

CAMSAT 8B - 30kg Microsat. V/U transponder, UHF CW and AX25 4k8/9k6
             GMSK telemetry beacons and S Band 192kbps GMSK Image and
             4k8/9k6 GMSK telemetry downlinks. Planning a launch from
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             Jiuquan in Oct 2021 into a 600km SSO.

CAMSAT 8C - 3U CubeSat. V/U linear transponder, UHF CW and AX25 4k8/9k6
             GMSK telemetry downlinks and S Band AX25 4k8/9k6 GMSK inter
             satellite links. Planning a launch from Jiuqhan in Oct 20121
             into a 600km SSO.

CAMSAT 8D - 3U CubeSat. V/U linear transponder, UHF CW and AX25 4k8/9k6
             GMSK telemetry downlinks and S Band AX25 4k8/9k6 GMSK inter
             satellite links. Planning a launch from Jiuqhan in Oct 20121
             into a 600km SSO.

Additional information is pending IARU frequency coordination activities.

[ANS thanks CAMSAT and the IARU for the above information]

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Satellite Shorts From All Over

+ NASA will be tracking Hurricane Dorian throughout this Labor Day
   (USA) weekend. The agency will provide status updates on the storm
   as it nears Florida and NASA's Kennedy Space Center on the state's
   central east coast, as well as updated video and imagery. Status
   updates on Hurricane Dorian will be available at:
   https://blogs.nasa.gov/hurricanes/tag/dorian-2019/
   Updated imagery and video of the storm, including any view of Dorian
   from the International Space Station, will be available as soon as
   possible the NASA Media Resources page at:
   https://www.nasa.gov/mediaresources

+ 2019 marks AMSAT's 50th Anniversary of Keeping Amateur Radio in
   Space. To help celebrate, AMSAT is sponsoring the AMSAT 50th
   Anniversary Awards Program. Full details are available at
   https://www.amsat.org/amsat-50th-anniversary-awards-program/
   Bruce Paige, KK5DO, Director of Contests and Awards, reported
   this week that the awards are being printed and will be sent
   shortly to all those who have applied.

+ The Huntingdon, West Virginia Herald Dispatch newspaper published
   a feature, "Ham radio event planned at South Point library" inform-
   ing interested Tri-State residents will have an opportunity to find
   out what ham radio and Amateur Radio Emergency Service (ARES) are
   all about during the event "HAM Radio – From Across the Street to
   Outer Space," set to take place at 6 p.m. Sept. 9 at the Briggs
   Lawrence County Public Library's Southern Branch. Presentations
   include a look at amateur radio's role and capability of communi-
   cating with the space shuttle, satellites and moon bounce.
   Access the full article at:
   https://tinyurl.com/ANS-244-Herald-Dispatch

+ The Mohammed bin Rashid space centre in Duibai has just announced
   on its twitter account that Astronaut Hazza alMansoori, the first
   Emirati astronaut, with the support of the Emirati Amateur Radio
   Society, will link from the ISS to the MBR Space Centre, during his
   misison from September 25th to October 4th. Further details will
   probably be announced by the MBR space centre on its twitter
   account:  @MBRSpaceCentre  (AMSAT-UK via Twitter)

+ Wondering what Terran radio hits our friends on Proxima Centauri
   are listening to? www.lightyear.fm has you covered! Currently,
   they're catching Pharrel's Happy for the first time (and they
   really have no idea how many commercials they'll be receiving
   shortly that use it as background music). (OrbitalIndex.com)
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+ NASA's Jet Propulsion Lab offers teachers of advanced placement math classes a lesson plan to calculate a flight to Mars. The Hohmann transfer is an elliptical orbit with the sun at one focus of the ellipse that intersects the orbit of the target planet. Launch occurs when Earth is at Hohmann perihelion (the point of the Hohmann orbit that is closest to the sun). Arrival occurs when Mars is at Hohmann aphelion (the point of the Hohmann orbit that is farthest from the sun). See: https://tinyurl.com/ANS-244-JPL-Hohmann-Orbit (www.jpl.nasa.gov)

+ Looking for a hands-on, out-of-this-world way to teach the engineering design process? Check out "Build a Satellite" from NASA challenge your students to design, build, test & improve a model satellite using common household items: https://www.jpl.nasa.gov/edu/teach/activity/build-a-satellite/ https://twitter.com/NASASTEM/status/1166349655124389888

+ Buy your kid a Happy Meal and get a STEM book ... https://tinyurl.com/ANS-244-NASA-STEM-Books

+ AMSAT congratulates Jeff Johns, WE4B on his recognition of support of the Young Amateurs Communications Ham Team, K8KDZ (Y.A.C.H.T) YACHT's mission is to expand horizons in the field of communications along with general and advanced ham radio techniques, and to foster a greater appreciation of the role they play in the overall hobby of amateur radio, as well as giving kids a challenge and enjoyment. See http://yacht.younghams.org/ (via Twitter)

+ Photos posted-- Motorola Special Event Station Celebrating "One Giant Leap For Mankind". The Motorola Special Event celebrating Apollo 11 went off without a hitch as we had a very good turn out of club members rotating the support of operations of one radio operator and one logger from 8am Saturday till noon Sunday. A little over 400 contacts were made including some that were engineers working for other contractors on the Apollo program, current and former Motorola employees, and customers of MSI. One of the highlights of the event was the re-transmission of the audio of the lunar landing exactly 50 years later. We asked for a pause in on-air traffic and the hundreds of people calling us went silent as we sent out the landing audio on a completely clear channel. Once again thank you to everyone that made this possible. It is very special to see interest in science and engineering in our up and coming generation! Let's hope we can continue to foster interest in them much as the 400,000+ Heros of Apollo in the astronauts, engineers and scientists that made it happen did it for our generation. Visit the photo album posted at: https://km0to.shutterfly.com/k9motspecialevent50yearslunarl/88

+ Starting September 3, 2019, K-12 students in U.S. public, private and home schools can enter the Mars 2020 Name the Rover essay contest. One grand prize winner will name the rover and be invited to see the spacecraft launch in July 2020 from Cape Canaveral Air Force Station in Florida. The Name the Rover contest is part of NASA's efforts to engage students in the STEM enterprise behind Mars exploration and inspire interest in science, technology, engineering and mathematics. The deadline for submissions is November 1, 2019. NASA posted all the info at: https://mars.nasa.gov/mars2020/participate/name-the-rover/

+ Registrations are now open for ESA’s Open Day in the Netherlands on Sunday 6 October – your chance to meet astronauts, space experts and see behind the scenes of Europe’s space adventure at ESA’s largest establishment. The theme of this year’s event is ‘ESA to the Moon’. As well as celebrating the 50th anniversary of the first Apollo lunar

landing, the Open Day will also be looking forward, highlighting ESA’s role in returning people to the Moon, including contributing the service module to NASA’s Orion spacecraft and participating in the Lunar Gateway. Event information and registration can be accessed at: https://tinyurl.com/ANS-244-ESTEC-Open-Day

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73 and remember to behave and to help keep amateur radio in space,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
k9jkm at amsat dot org